

ID Code 6322

Contact Information E-mail: vd.rezvani@gmail.com
vahid.rezvani@alum.sharif.edu

Academic Positions Postdoctoral Researcher, SUT¹, Tehran, Iran (June 2022 – June 2023)

- Educations**
- 1) Ph.D. in Physics (Quantum Information Science)**
SUT, Tehran, Iran
2013-2021
Ph.D. advisor: Ali Rezakhani (SUT)
Thesis title: *Optimal Coherent Control of Quantum Dynamics: Process-Based Approach*
Thesis score: very good
GPA: 18.35/20 (A+)
 - 2) M.Sc. in Physics (Condensed Matter)**
IU², Isfahan, Iran
2010-2012
Thesis title: *The Casimir-Lifshitz Interaction between Dielectrics Carrying Charge Disorder*
M.Sc. advisors: Jalal Sarabadani (IU)
Ali Naji (IPM³)
GPA: 18.75/20 (A+)
 - 3) B.Sc. in Physics**
HU⁴, Bandar Abbas, Iran
2006-2010
GPA: 17.37/20 (A)
 - 4) High School Diploma (Physics and Mathematics)**
Ebne Sina, Bandar Abbas, Iran
GPA: 17.94/20 (A)

¹ Sharif University of Technology

² Isfahan University

³ Institute for Research in Fundamental Sciences

⁴ Hormozgan University

Publications

- 1) V. Rezvani and A. Rezakhani, Variational Approach to Controlling Dynamics of Open Quantum Systems, Iran. J. Phys. Res. **22**, 539 (2022)
- 2) V. Rezvani and A. Rezakhani, Coherent Dynamical Control of Quantum Processes, Phys. Rev. A **104**, 012215 (2021)
- 3) V. Rezvani, J. Sarabadani, A. Naji, and R. Podgornik, Electromagnetic Fluctuation-Induced Interactions in Randomly Charged Slabs, J. Chem. Phys. **137**, 114704 (2012)

Proof Reader for:

Book "Analysis and Data-Based Reconstruction of Complex Nonlinear Dynamical Systems (Springer Cham, Switzerland , 2019)" written by Mohammad Reza Rahimi Tabar

Awards

- 1) Accepted as a Ph.D. candidate in Physics Department of SUT without an entrance exam as a qualified M.Sc. student (2013)
- 2) First rank among M.Sc. students (class of 2010) in Physics Department of IU
- 3) First rank among B.Sc. students (class of 2006) in Physics Department of HU

Research Interests

- 1) Quantum Information Science
- 2) Quantum Computation
- 3) Control of Open Quantum Systems
- 4) Theory of Open Quantum Systems
- 5) Quantum Thermodynamics
- 6) Machine Learning
- 7) Casimir Effect and Charged Disordered Systems

Memberships

- 1) Quantum Information Group in SUT, 2015-2021
- 2) Member of Physics Society of Iran (PSI)
- 3) Soft Matter, Biological and Statistical Physics Research Group in IPM, 2012

Referee for: Iranian Journal of Physics Research (IJPR)

**International
and National
Conferences**

- 1) V. Rezvani,
Coherent Dynamical Control of Quantum Processes,
The Physics Society of Iran Annual Meeting 1400,
Physics Department, University of Tehran, December 2021
(presented as talk- online)
- 2) V. Rezvani and A. Rezakhani,
*Optimal-Coherent Dynamical Control Strategy for
Decoherence Suppression and Quantum Simulations*,
College on "Energy Transport and Energy Conversion in the
Quantum Regime", International Centre for Theoretical
Physics (ICTP), Trieste, Italy, 12 – 30 August 2019 (presented
as poster)
- 3) V. Rezvani,
*Optimal-Coherent Dynamical Control Approach for
Decoherence Suppression and Quantum Simulation*,
26th Physics Spring Conference, IPM, June 2019 (presented
as talk)
- 4) V. Rezvani and A. Rezakhani,
*Decoupling of Quantum System-Environment by Coherent
Control*,
The First National Conference & Workshop on Quantum
Information & Open Quantum Systems (QIOQS), Azarbaijan
Shahid Madani University, 2018 (presented as poster)
- 5) V. Rezvani and A. Rezakhani,
Dynamical Control of Open Quantum Systems,
6th Iran International Conference on Quantum Information,
SUT, 2018 (presented as poster)
- 6) V. Rezvani, J. Sarabadani, and A. Naji,
*The Casimir-van Der Waals Force Between Neutral Dielectric
Slabs Carrying Charge Disorder*,
20th Physics Spring Conference, IPM, May 2013 (presented as
poster)

- 7) International School on "Quantum Thermodynamics and Open Quantum Systems", IPM, 9-11 January 2018 (participant)
- 8) 2nd Conference on "Soft Matter, Biological and Statistical Physics", IPM, October 2013 (participant)
- 9) Polymer Physics School, IPM, October 2013 (participant)
- 10) 20th Physics Spring Conference, IPM, May 2013 (participant)
- 11) Condensed Matter Physics School, Isfahan University of Technology (IUT), September 2011(participant)
- 12) Strongly Correlated Systems School, IPM, June 2011(participant)

Teaching Experiences

- 1) General Physics I and II
B.Sc. course in Islamic Azad University, Hashtgerd Branch (February 2016 – September 2023)
- 2) Teaching assistant of undergraduate course, General Physics I taught by Saman Moghimi Araghi and Omid Akhavan, SUT (Fall 2015)
- 3) Teaching assistant of undergraduate course, General Physics I taught by Saman Moghimi Araghi, SUT (Fall 2013)
- 4) Teaching assistant of undergraduate course, Mathematical Methods for Physics I taught by Mohammad Hamedpour Darabi, HU (Spring 2010)
- 5) Teaching assistant of undergraduate course, Foundations of Electromagnetic Theory I taught by Mohammad Hamedpour Darabi, HU (Spring 2010)

Attended Advanced Courses

- 1) Quantum Information taught by Vahid Karimipour, SUT (Spring 2017)
- 2) Open Quantum Systems taught by Ali Rezakhani, SUT (Fall 2015)
- 3) Stochastic Processes taught by Mohammad Reza Rahimitabar, SUT (Fall 2014)

- 4) Critical Phenomena taught by Saman Moghimi Araghi, SUT (Fall 2014)
- 5) Statistical Field Theory taught by Shahin Rouhani, SUT (Spring 2014)
- 6) Many Body Physics taught by Akbar Jafari, SUT (Fall 2013)

Computer Skills

Mathematica, Python, Tecplot, Latex, Office

Academic References

- 1) Ali Rezakhani
SUT, Tehran, Iran
Phone: +98 21 6616 4523
E-mail: rezakhani@sharif.edu
- 2) Jalal Sarabadani
IPM, Tehran, Iran
Phone: +98 21 22835061
E-mail: jalal.sarabadani@gmail.com
- 3) Ali Naji
IPM, Tehran, Iran
Phone: +98 21 22280692
E-mail: a.naji@ipm.ir